

Clearing and Sanitization Matrix

Note: June 27, 2005, update changes sanitization requirements for SRAM (sanitization procedures same as DRAM) and adds instructions for reading the Matrix.

Media					Clear					Sanitize										
Magnetic Tape																				
Type I	a						b									m				
Type II	a						b									m				
Type III	a						b									m				
Magnetic Disk																				
Bernoullis	a	c					b									m				
Floppy	a	c					b									m				
Non-Removable Rigid Disk		c				a			d							m				
Removable Rigid Disk	a	c				a			d							m				
Optical Disk																				
Read Many, Write Many		c														m				
Read Only																m	n			
Write Once, Read Many (Worm)																m	n			
Memory																				
Dynamic Random Access Memory (DRAM)		c	h				c				h				m					
Electrically Alterable PROM (EAPROM)				i								j			m					
Electrically Erasable PROM (EEPROM)				i						g					m					
Erasable Programmable ROM (EPROM)					k		c							l	m				l then c	
Flash EPROM (FEPRM)				i			c					i			m				c then i	
Programmable ROM (PROM)		c													m					
Magnetic Bubble Memory		c				a	c								m					
Magnetic Core Memory		c				a			e						m					
Magnetic Plated Wire		c					c			f					m				c and f	
Magnetic Resistive Memory		c													m					
Non-Volatile RAM (NOVRAM)		c	h				c				h				m					
Read Only Memory (ROM)															m					
Synchronous DRAM (SDRAM)		c	h				c				h				m					
Static Random Access Memory (SRAM)		c	h				c				h				m					
Equipment																				
Monitor			h																q	
Impact Printer			h								h						p		p then h	
Laser Printer			h								h						o		o then h	

INSTRUCTIONS FOR READING THE MATRIX:

A letter in black in the above table indicates the procedure is a complete, single option, e.g. EEPROM sanitization: Perform either procedure g or m (refer to indices below) and the media/memory is completely sanitized. Letters in red indicate the procedures must be combined for a complete sanitization, e.g., Laser Printer sanitization: o must be performed, then h. Note: when a combination of two procedures is required, the far right hand column indicates the order of the procedures. e.g., o then h.

INDEX:

- Degauss with Type I, II, or III degausser.
- Degauss with same Type (I, II, or III) degausser.
- Overwrite all addressable locations with a single character.
- THIS METHOD NOT APPROVED FOR SANITIZING MEDIA THAT CONTAINS TOP SECRET INFORMATION.**
 - Before any sanitization product is acquired, careful analysis to the overall costs associated with overwrite/sanitization should be made. Depending on the contractor's environment, the size of the drive and the differences in the individual products time to perform the sanitization, destruction of the media might be the preferred (i.e., economical) sanitization method.
 - Overwrite all addressable locations with a character, then its complement. Verify "complement" character was written successfully to all addressable locations, then overwrite all addressable locations with random characters; or verify third overwrite of

random characters. Overwrite utility must write/read to “growth” defect list/sectors or disk must be mapped before initial classified use and remapped before sanitization. Difference in the comparison lists must be discussed with the DSS Industrial Security Representative (IS Rep) and/or Information System Security Professional (ISSP) before declassification. *Note: Overwrite utilities must be authorized by DSS before use.*

- e. Overwrite all addressable locations with a character, its complement, then a random character.
- f. Each overwrite must reside in memory for a period longer than the classified data resided.
- g. Overwrite all locations with a random pattern, then with binary zeros, and finally with binary ones.
- h. Remove all power to include battery power.
- i. Perform a full chip erase as per manufacturer’s data sheets.
- j. Perform i above, then c above, a total of three times.
- k. Perform an ultraviolet erase according to manufacturer’s recommendation.
- l. Perform k above, but increase time by a factor of three.
- m. Destruction see 1.) and 2.) below.
- n. Destruction required only if classified information is contained.
- o. Run 1 page (font test acceptable) when print cycle not completed (e.g. paper jam or power failure). Dispose of output as unclassified if visual examination does not reveal any classified information.
- p. Ribbons must be destroyed. Platens must be cleaned.
- q. Inspect and/or test screen surface for evidence of burn-in information. If present, screen must be destroyed.

Destruction Methods:

1) All methods of destruction must be authorized by DSS before use. Types of destruction are Disintegrate, incinerate, pulverize, or melt. **Shredding of IA products, e.g. floppies, tapes, is NOT authorized.**

2) NSA is offering to destroy contractor and government classified non-COMSEC related information systems media. Contractors must get a letter from their customer authorizing NSA to destroy their classified or have the contracts security classification specification (DD254) revised.

Direct All Inquiries to:

Mr. James Redman (Chief)
Classified Material Conversion Services (CMC)
9800 Savage Road
Ft. George G. Meade, MD 20755-6890
Phone Number: 301-688-6672

A. Secret and Below – NO COMSEC Material

ATT: CMC-Degaussing- suite 6875
9800 Savage Road.
Ft.George G. Meade, MD 20755-6875

Top Secret – NO COMSEC Material

449276 - BA21
DIRNSA Fort Meade

Authorized Types of Material

- ☐ Hard Drives: Internal and Removable
- ☐ Removable Disk Platters
- ☐ 9-Track Tapes (10 ½ “ diameter)
- ☐ Bernoulli Disks
- ☐ CD-ROMs
- ☐ Data Cassettes
- ☐ Videocassette, 8mm
- ☐ Videocassette, VHS

B. Secret and Below – NO COMSEC Material

National Security Agency
Attn: CMC - Suite 6890
9800 Savage Road
Ft. George G. Meade, MD 20755-6890

Top Secret – NO COMSEC Material

449563 – BA20

Authorized Types of Material

- ☐ Printed Circuit Boards
- ☐ Film (Silver Based)
- ☐ Computer Chips
- ☐ Aluminum Disks
- ☐ All Floppy Disks
- ☐ Microfiche
- ☐ Typewriter Ribbon
- ☐ Mylar
- ☐ Paper

Shipping Instructions: (Secret and below)

Registered Mail

Maximum weight: 40 pounds

Separate Accountable from Non-Accountable

Separate material by type within a shipment (HDs with HDs, Platters with Platters, etc.)

Include Destruction Certificate (Two Copies)

Provide self-addressed envelope

Shipping Instructions: (Top Secret)

Call NSA to confirm "No Restrictions"

Maximum weight: 40 pounds

Separate material by type within a shipment (All other material.)

Include Destruction Certificate (Two Copies)

Provide self-addressed envelope

Authorized Types of Material

No Restrictions